

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

2. I have had extensive education and experience in the field of optical devices, and particularly stereoscopic displays, as shown by the attached copy of my *curriculum vitae*.

3. I have studied the complete file on the Subject Patent Application, including the Official Action of February 20, 2008 in which the Examiner rejected all the claims under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Publication No. 2001/0028416 (Divelbiss) in view of the ColorSelect™ publication. In support of this rejection, the Examiner held (Page 8, last paragraph):

“The prior art, *Divelbiss* E1 as modified by *Divelbiss* E2, discloses a base device which differs from the claimed device by the substitution of some components, two linear polarizers, with other components, two rectifiers using exclusively retarders and one or two 1/2-wave retarders. As described above the substituted components and their functions were known in the art. At the time of invention, it would have been obvious to a person of ordinary skill in the art to make these substitutions, the results of which would have been predictable. The suggestion/motivation would have been to provide advantages such as to provide high light efficiency (see for example *ColorSelect* page 1).”

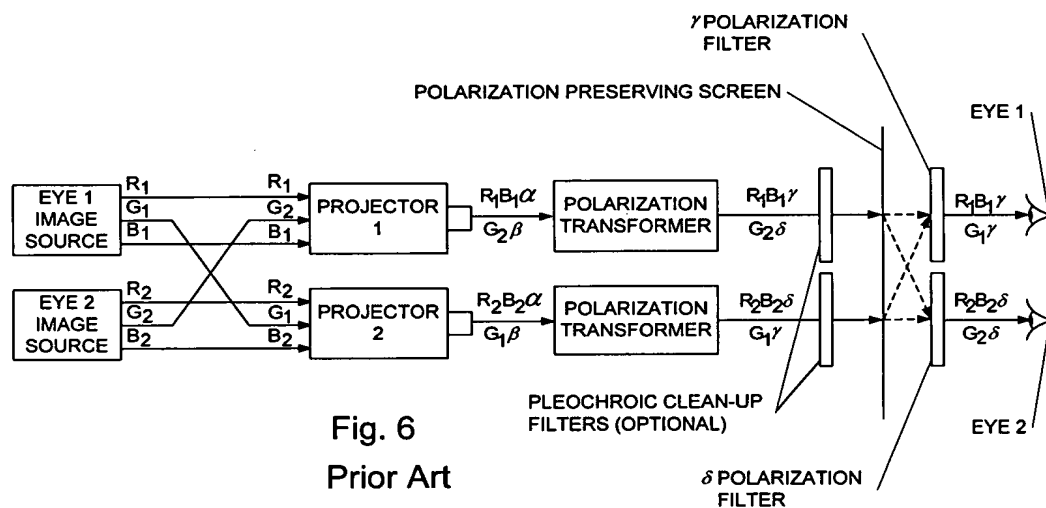
4. In my opinion, such a modification of Divelbiss (the primary reference) and the ColorSelect™ publication would not have been obvious to one skilled in the art at the time my invention was made, and also would have rendered the primary reference inoperable to perform its intended function, namely to be used for stereoscopic displays.

5. The ColorSelect™ filter, which is expressly acknowledged in the description of my patent application, was intended for use as a component internal to a projector, i.e. before the projection lens, as shown in Fig. 2 in the Subject Patent Application illustrating the prior art. In such a use, the ColorSelect™ filter is part of the projector, as distinguished from a projector display system involved in Fig. 12 of the Subject Patent

Application. The two uses of filters are quite distinct from each other, each involving its own problems and its own solutions.

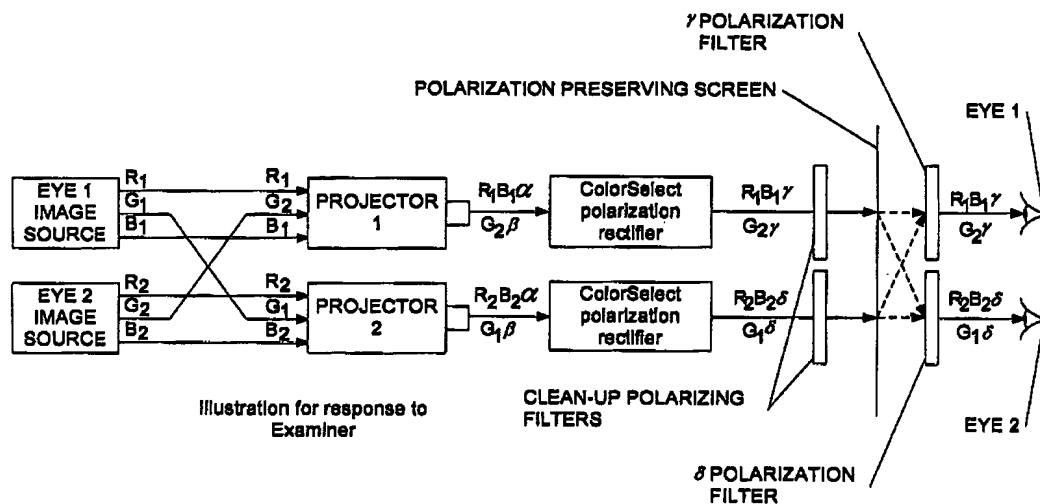
6. Moreover, in my opinion the proposed substitution by the Examiner would render Divelbiss inoperable for its intended function, as clearly shown by the following.

7. A general scheme of E1 as modified by E2 as referred to in the above-quoted comment by the Examiner is shown in Fig. 6 in the Subject Patent Application, which I reproduce below for convenience:



8. Divelbiss et al describe an embodiment in which the polarization transformer in this scheme is a half-wavelength retarder (Fig. 10 in Divelbiss patent application).

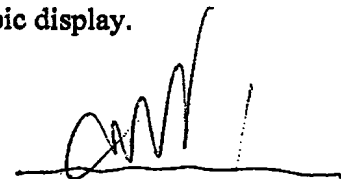
9. Replacement of the polarization transformers in this scheme by a ColorSelect polarization rectifier (E1 modified by E2 further modified by ColorSelect) will render the resulting system useless. This is clear from the resulting system, as shown in the following figure:



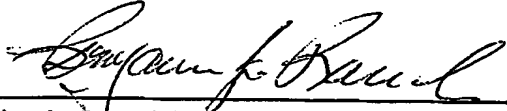
10. The two ColorSelect polarization rectifiers in this scheme are different. The top one converts orthogonal polarization states  $\alpha$  and  $\beta$  into  $\gamma$ , while the bottom one converts  $\alpha$  and  $\beta$  into  $\delta$ . I have also replaced the original pleochroic polarizers by plain polarizers (E1 modified by E2, ColorSelect and E3).

11. In this scheme, the green color components of the stereoscopic images that reach the eyes of the viewer are crossed. Eye 1 of the viewer will be exposed to the R and B (red and blue) components of the Eye 1 image as needed, but also to the G (green) component of the Eye 2 image. Similar situation results with respect to the other image.

For proper stereoscopic viewing it is absolutely necessary that each eye of the viewer will be exposed to the color components of the corresponding eye image, and only to these color components. Therefore, the system E1 as modified by E2, as further modified by ColorSelect would not be operable for stereoscopic display.

  
Yitzhak Weissman

I hereby certify that on June 1, 2008 appeared before me, Benjamin J. Barish, of 11 Menachem Begin Street, Ramat Gan, Israel, Yitzhak Weissman, known to me, and that after I warned him that he must declare the truth, and that he will be liable to the penalties fixed by law if he does not do so, he acknowledged the truth of this Declaration and signed it.

A handwritten signature in cursive script, appearing to read "Benjamin J. Barish", written over a horizontal line.

Benjamin J. Barish  
Advocate and Notary Public

## Dr. Yitzhak Weissman: Curriculum Vitae

### 1 Personal

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Birth Date: Jan. 27 1949	Tel: +972 (09) 9557403 (H)
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	E-mail: itsikw@advisol.co.il

### 2 Education

1980: Ph.D. degree in Chemical Physics (Tel Aviv University)

1972: M.Sc. degree in Physics (Tel Aviv University)

1970: B.Sc. degree in Physics and Applied Mathematics

### 3 Professional Experience

January 2002: Advisol. Founder, owner and director. Development and production of polarizing filters for 3D displays. Developer of breakthrough filter technology StereoPol™ (patent pending). Representative of Israel in the International Stereoscopic Union. Consulting and R&D subcontracting.

1997 – 2001: ComView Visual Systems. Development of multi-projector displays. Joined the company in early stage as Chief Physicist. Became responsible for all electro-optical aspects of the products (projectors, optics, color management, soft-edge blending etc.). Was also responsible for algorithms and intellectual property.

1975 – 1997: Soreq NRC. In last eight years served as Head of Technology group in Electro-Optics division.

During employment in Soreq stayed two periods in the US (sabbaticals). In the first period worked in R&D as a postdoctoral fellow in the University of California at Berkeley, and in the second period as a Professor of Electrical Engineering in the University of Utah.

### 4 Development of selling products

- Fiber-optic sampling probes for IR spectroscopy (patented)
- Multi-projector display for Air Traffic Control Simulator
- Special filters for 3D projection displays (patent pending)
- Machine for color grading of diamonds

### 5 Distinguishing characteristics

- Innovation and R&D leadership
- Proven capability for turning concepts into successful products
- Broad education in Physics and in Electro-Optics in particular
- Ability to analyze complex interdisciplinary systems
- Technical writing: patents, procedures, specifications, tenders, etc.

### 6 Publications

Book: Optical Network Theory (Artech House). From reader's comment (posted in amazon.com): "This text is a very successful and daring attempt to use network theory to study optical systems... A great book!"

More than 30 refereed articles (list available upon request).

Numerous conference papers and research reports.

Patents: US patent 5,569,923.